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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,205	06/28/2004	Friedrich Heizmann	PD010084	5271
7590 Joseph S. Tripoli Thomson multimedia Licensing Inc CN 5312 Princeton, NJ 08543-0028			EXAMINER YU, HENRY W	
			ART UNIT 2182	PAPER NUMBER
			MAIL DATE 05/03/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/500,205

Applicant(s)

HEIZMANN ET AL.

Examiner

Henry Yu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 06/28/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

The instant application having Application No. 10/500,205 has a total of 13 claims pending in the application; there is 1 independent claim and 12 dependent claims, all of which are ready for examination by the examiner.

I. INFORMATION CONCERNING PRIORITY

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on December 28, 2001. It is noted, however, that applicant has not filed a certified copy of the foreign priority application as required by 35 U.S.C. 119(b).

II. INFORMATION CONCERNING OATH/DECLARATION

Oath/Declaration

2. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in **37 C.F.R. 1.63**.

III. INFORMATION CONCERNING DRAWINGS

Drawings

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show "*serial bus connection 19*" (**Page 4, line 38**) and "*bus interface 20*" (**Page 5, line 20**) as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the

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drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

IV. OBJECTIONS TO THE SPECIFICATION

Specification

4. The disclosure is objected to because of the following informalities:

On [Page 2, lines 2-3], the passage "*interface is essential constructed with*" is awkwardly worded. Examiner suggests Applicant replace the word "*essential*" with *—essentially—*.

Starting on **[Page 5, line 1]**, item 15 is referred to as a "*central IC*," though earlier in the specification (**[Page 4, line 27]**) item 15 is referred to as a "*baseband processor*." Given that "*central IC*" is used more than "*baseband processor*," Examiner suggests Applicant always refer to item 15 as a *–central IC–*.

On **[Page 5, lines 7-8]**, item 15 is referred to as a "*peripheral IC*," though earlier in the specification (**[Page 5, line 1]**), item 15 is referred to as a "*central IC*." In the interest of clarity, Examiner suggests Applicant always refer to item 15 as a *–central IC–*.

On **[Page 5, line 17]**, the label "15" is missing after "*central IC*."

On **[Page 5, line 34]**, item 22 is referred to as a "*controller*," though FIG. 2 refers to item 22 as a "*bus controller*." In the interest of clarity, Examiner suggests Applicant always refer to item 22 as a *–bus controller–*.

On **[Page 6, line 21]**, items 27 and 28 are referred to as "*registers*," though earlier in the specification on **[Page 6, line 20]**, items 27 and 28 are referred to as "*PLL registers*." In the interest of clarity, Examiner suggests Applicant refer to items 27 and 28 together as a *–PLL registers–*.

On **[Page 6, line 35]**, item 25 is referred to as a "*register*," though earlier in the specification on **[Page 6, line 32]**, item 25 is referred to as a "*RXGain register*." In the interest of clarity, Examiner suggests Applicant refer to item 25 as a *–RXGain register–*.

On **[Page 7, line 2]**, **[Page 9, line 1]**, and **[Page 9, line 21]**, item 24 is referred to as a "*preregister*," though earlier in the specification on **[Page 6, line**

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39], item 24 is referred to as a "*RXGain Preload register*." In the interest of clarity, Examiner suggests Applicant refer to item 24 a "*RXGain Preload register*." Otherwise, Examiner suggests that Applicant explicitly disclose that "*preregister*" does refer to the "*RXGain Preload register*."

On **[Page 7, line 31]** and **[Page 9, line 32]**, item 12 is referred to as a "*peripheral IC*," though earlier in the specification item 12 is referred to as a "*front-end IC*." In the interest of clarity, Examiner suggests Applicant refer to item 12 a – *front-end IC*–. Otherwise, Examiner suggests that Applicant explicitly disclose that "*peripheral IC*" does refer to the "*front-end IC*."

On **[Page 8, line 33]** and **[Page 9, line 15]**, item 25 is referred to as a "*working register*," though earlier in the specification on **[Page 6, line 32]**, item 25 is referred to as a "*RXGain register*." In the interest of clarity, Examiner suggests Applicant refer to item 25 a –*RXGain register*–. Otherwise, Examiner suggests that Applicant explicitly disclose that "*working register*" does refer to the "*RXGain register*."

On **[Page 9, line 4]**, item 25 is referred to as a "*next register*," though earlier in the specification on **[Page 6, line 32]**, item 25 is referred to as a "*RXGain register*." In the interest of clarity, Examiner suggests Applicant refer to item 25 a –*RXGain register*–.

Appropriate correction is required.

V. REJECTIONS NOT BASED ON PRIOR ART

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 1, 3-6, 8-10, and 12** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "*the current operating parameter*" in line 6.

There is insufficient antecedent basis for this limitation in the claim, given that "*current operating parameter*" has not been disclosed beforehand in the claim. Examiner suggests Applicant replace the word "*the*" that is before "*current operating parameter*" with *-a-*.

Claim 3 recites the limitation "*start of a data transmission*" in lines 1-2.

There is insufficient antecedent basis for this limitation in the claim, given that "*start of a data transmission*" has not been disclosed beforehand in the claim or any parent claim. Examiner suggests Applicant drop the word "*the*" that is before "*start of a data transmission*."

Claim 3 recites the limitation "*control line*" in line 3. There is insufficient antecedent basis for this limitation in the claim, given that "*control line*" has not been disclosed beforehand in the claim or any parent claim. Examiner suggests Applicant replace the word "*the*" that is before "*control line*" with *-a-*.

Claim 4 recites the limitation "*register write address*" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim, given that "*register write address*" has not been disclosed beforehand in the claim or any parent

claim. Examiner suggests Applicant replace the word "*the*" that is before "*register write address*" with *-a-*.

Claim 5 recites the limitation "*start signal*" in line 2. There is insufficient antecedent basis for this limitation in the claim, given that "*start signal*" has not been disclosed beforehand in the claim or any parent claim. Examiner suggests Applicant replace the word "*the*" that is before "*start signal*" with *-a-*.

Claim 6 recites the limitation "*current operating parameter*" in line 7. There is insufficient antecedent basis for this limitation in the claim, given that "*current operating parameter*" has not been disclosed beforehand in the claim. Furthermore, the claim seems to be written more as an independent claim rather than being dependent on **claim 1** (the claim discloses a device that carries out the method in **claim 1**, yet the limitations disclosed are similar to those in **claim 1**). Examiner assumes that the claim is independent and suggests Applicant replace the word "*the*" that is before "*current operating parameter*" with *-a-*.

Claim 9 recites the limitation "*register write address*" in line 2. There is insufficient antecedent basis for this limitation in the claim, given that "*register write address*" has not been disclosed beforehand in the claim or any parent claim. Examiner suggests Applicant replace the word "*the*" that is before "*register write address*" with *-a-*.

Claim 10 recites the limitation "*start signal*" in line 2. There is insufficient antecedent basis for this limitation in the claim, given that "*start signal*" has not been disclosed beforehand in the claim or any parent claim. Examiner suggests Applicant replace the word "*the*" that is before "*start signal*" with *-a-*.

Claim 12 recites the limitations "*gain setting*" and "*receive gain*" in line 2.

There is insufficient antecedent basis for these limitations in the claim, given that "*gain setting*" and "*receive gain*" have not been disclosed beforehand in the claim or any parent claim. Examiner suggests Applicant replace the word "*the*" that is before "*gain setting*" and "*receive gain*" with *-a-*.

VI. CLAIM INTERPRETATION

Claim Interpretation

7. **Claims 1-10** are so broadly worded that the claims can read on any system that deals with the transfer of operating parameters/operands (or data) between devices, especially in cases of a microprocessor connected with a coprocessor. Hence, for the purpose of examination the Examiner takes the broadest possible interpretation of the claims, which also includes basic data transfer systems between IC devices/processors.

VII. REJECTIONS BASED ON PRIOR ART

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claim 1, 3, 6, and 8** are rejected under 35 U.S.C. 102(b) as being anticipated by Louie et al. (Patent Number US 4,547,849).

As per **claim 1**, Louie et al. discloses "*the method for setting an operating parameter in a peripheral IC (coprocessor; FIG. 1, item 207) of an electronic appliance, in which method the operating parameter (data and predetermined address corresponding to said I/O address) is transmitted from a central IC (microprocessor; FIG. 1, combination of items 200, 202, 204, 206) in the electronic appliance via a bus connection to the peripheral IC (coprocessor; FIG. 1, item 207) wherein the operating parameter is buffered in a preregister (data buffer register and I/O address register; FIG. 6, items 480 and 472 respectively) of the peripheral IC while a working process is running with the current operating parameter stored in a working register (the microprocessor monitors the status of the coprocessor through signals such as BUSY# and ERROR#, which indicate current condition of the coprocessor before transfer) and that the buffered operating parameter is transferred to said working register to become active in the working process only if a transfer signal has been sent from the central IC (microprocessor; FIG. 1, combination of items 200, 202, 204, 206) via the bus connection (Column 28, lines 16-25).*"

As per **claim 3**, Louie et al. discloses "*the start of a data transmission (D15-D0) from the central IC (microprocessor; FIG. 1, combination of items 200, 202, 204, 206) to the peripheral IC (coprocessor; FIG. 1, item 207) is also signaled via the control line (COACK; FIG. 3).*"

As per **claim 6**, the limitations are similar to those disclosed in **claim 1** above. Hence, this claim has been rejected accordingly.

As per **claim 8**, the limitations are similar to those disclosed in **claim 3** above. Hence, this claim has been rejected accordingly.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 2, 4-5, 7, and 9-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Louie et al. (Patent Number US 4,547,849) in view of Poulis et al. (Patent Number US 6,128,311).

As per **claim 2**, Louie et al. discloses "*the bus connection is a...bus connection with a data line, a control line (**COREQ and COACK#**) and a clock line, and the transfer signal is transmitted via the control line to the peripheral IC (**coprocessor; FIG. 1, item 207; Column 7, Table I**)."* However, Louie et al. does not explicitly disclose that such a bus connection is serial.

Poulis et al. discloses the use of serial interfacing between a processor and a coprocessor (**Abstract, lines 1-14**).

Louie et al. and Poulis et al. are analogous art in that both relate to IC circuits, especially in connection and interface.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the device as disclosed by Louie et al. to use a serial bus connection between the processors/IC components as disclosed by Poulis et al.

The motivation for doing so is because Poulis et al. notes that several small-form interfaces can not accommodate parallel communications interfaces, given the plurality of signals that must be present at the same time for parallel communications interfaces. Poulis et al. discloses this as a small-form interface (in this example PCMCIA) **[may dictate the size and hence the capacity of the universal connector, the remaining pins available on the universal connector for interfacing to an external module may be limited thereby prohibiting a parallel interface (Column 4, lines 14-17)]**. On the other hand, serial communications by definition sends all bits sequentially over a single communication channel. With fewer channels needed, one not only can utilize small-form interfaces that might otherwise preclude the use of parallel communications interface but also simplify the circuit paths between devices/components.

As per **claim 4**, the combination of Louie et al. and Poulis et al. discloses "the method" (see rejection to **claim 2** above). Louie et al. further discloses "the register write address (**A23-AO; Column 7, Table I**) for writing to the preregister (**buffer**) is transferred to the peripheral IC (**coprocessor**) on the data line ahead of the operating parameter (**data; FIG. 3; Column 28, lines 3-8 and lines 16-25**)." It should also be noted that the idea of transmitting address and data over

the same line/bus is inherent in the definition of a serial bus (the use of which is disclosed by Poulis et al. with the motivation also shown for **claim 2**), which only contains a single line for transmission.

As per **claim 5**, the combination of Louie et al. and Poulis et al. discloses *"the method" (see rejection to **claim 2** above). Louie et al. further discloses "the start signal occurs on the control line (**COREQ and COACK#**) with a rising or falling edge of a clock signal on the clock line and the transfer signal (**COACK#**) occurs on the control line with a falling or rising edge of a clock signal on the clock line (**FIG. 3-4**)."*

As per **claim 7**, the limitations are similar to those disclosed in **claim 2** above. Hence, this claim has been rejected accordingly.

As per **claim 9**, the limitations are similar to those disclosed in **claim 4** above. Hence, this claim has been rejected accordingly.

As per **claim 10**, the limitations are similar to those disclosed in **claim 5** above. Hence, this claim has been rejected accordingly.

12. **Claims 11-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Louie et al. (Patent Number US 4,547,849) in view of Adams et al. (Patent Number US 7,120,427 B1).

As per **claim 11**, Louie et al. discloses the *"device" (see rejection to **claim 6** above)*. However, Louie et al. does not disclose that *"the peripheral IC relates to a front-end IC for a communication arrangement for wireless data transmission and the central IC relates to a signal processing device, with means for*

modulation or demodulation of the mixed RF input signal and for further signal processing in baseband."

Adams et al. discloses "*the peripheral IC (**radio integrated circuit**) relates to a front-end IC for a communication arrangement for wireless data transmission (**wireless transceiver**) and the central IC relates to a signal processing device (**receive signal processor and transmit processor, which are located in a modem; Column 5, lines 1-8 and lines 20-24**), with means for modulation or demodulation (**Column 5, lines 1-8 and lines 20-24**) of the mixed RF input signal (**RF transceiver; Column 4, line 44**) and for further signal processing in baseband (**Column 4, lines 58-67; Column 17, lines 59-63**)."*

Louie et al. and Adams et al. are analogous art in that both relate to IC circuits, especially in the setting and transfer of data/parameters.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the device as disclosed by Louie et al. to include components that focus on wireless communication and digital signal processing as disclosed by Adams et al.

The motivation for doing so is because Adams et al. notes that **[different radio applications require a different level of performance, and different levels of performance (Column 1, lines 54-55)]**. In such instances, it would be easier to have a wireless system that is configurable through variable parameters and settings rather than have hard-coded parameters and settings with regards to the appropriate conditions.

As per **claim 12**, the combination of Louie et al. and Adams et al. discloses the “device” (see rejection to **claim 11** above). Adams et al. further discloses “the operating parameter relates to the gain setting for the receive gain in the front-end IC (**gain settings...are set; Column 17, lines 35-39**).”

As per **claim 13**, Louie et al. discloses the “device” (see rejection to **claim 6** above). However, Louie et al. does not disclose that the “device is configured as a send and receive device for wireless data transmission in accordance with the HIPERLAN2 standard.”

Adams et al. discloses “device is configured as a send and receive device for wireless data transmission (**RF transceiver**) in accordance with the HIPERLAN2 standard (**Column 19, lines 20-30**).”

Louie et al. and Adams et al. are analogous art in that both relate to IC circuits, especially in the setting and transfer of data/parameters.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the device as disclosed by Louie et al. to work within a device that handles wireless communication using the HIPERLAN2 standard as disclosed by Adams et al.

The motivation for doing so is because Adams et al. notes that **[different radio applications require a different level of performance, and different levels of performance (Column 1, lines 54-55)]**, and that wireless is becoming more widespread along with the many wireless protocols that are available (**Column 2, lines 4-5**). At the same time, Louie et al. deals with the basic principles of transferring and setting data and parameters between different IC

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circuits (this can also apply to different sections of a single IC circuit). In such instances, it would be easier to have a wireless system that is configurable through variable parameters and settings rather than have hard-coded parameters and settings with regards to the appropriate conditions.

VIII. RELEVANT ART CITED BY THE EXAMINER

13. The following prior art made of record and relied upon is cited to establish the level of skill in the applicant's art and those arts considered reasonably pertinent to applicant's disclosure. See **MPEP 707.05(c)**.

14. The following references teach data transfer as they pertain to IC circuits, especially in the setting and transfer of data/parameters.

U.S. PATENT NUMBERS:

5,737,633

6,038,651

6,111,814

6,163,832

NON-PATENT LITERATURE

IEEE 100 – The Authoritative Dictionary of IEEE Standards Terms (Seventh Edition). New York: IEEE, 2000, p. 1029.

IX. CLOSING COMMENTS

Conclusion

a. STATUS OF CLAIMS IN THE APPLICATION

15. The following is a summary of the treatment and status of all claims in the application as recommended by **M.P.E.P 707.07(i)**:

a(1). CLAIMS REJECTED IN THE APPLICATION

16. Per the instant office action, claims 1-13 have received a first action on the merits and are subject of a first action non-final.

17. The examiner requests, in response to this Office action, support be shown for language added to any original claims on amendment and any new claims. That is, indicate support for newly added claim language by specifically pointing to page(s) and line no(s) in the specification and/or drawing figure(s).

This will assist the examiner in prosecuting the application.


18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Yu whose telephone number is (571) 272-9779. The examiner can normally be reached on Monday to Friday, 8:00 AM to 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim HUYNH can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

April 24, 2007

Henry Yu
Art Unit 2182TANH Q NGUYEN
PRIMARY EXAMINER
TECHNOLOGY CENTER 2100
April 26, 2007